



AIRCRAFT OWNERS AND PILOTS ASSOCIATION

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DOCKET FILE COPY ORIGINAL

May 7, 1996

MAY 8 1996

Office of the Secretary
Federal Communications Commission
1919 M Street, NW
Washington, DC 20554

To the Commission:

Please be advised that the Aircraft Owners and Pilots Association (AOPA), is submitting comments to WT Docket No. 96-1, FCC 96-2 for the **second** time. Also enclosed is a copy of proof that this document was sent by the April 30 deadline to the FCC. We have tried to track this package within your company and have failed to find its location.

If you have any questions or any problems, please contact me as soon as possible at 301/695-2203.

Sincerely,

Tammy L. Sigafoose
Administrative Assistant
Government and Technical Affairs

Enclosures

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Package on Van	WASHINGTON	DC	04/30	09:06
Package on Van	WASHINGTON	DC	04/30	08:47
Package on Van	WASHINGTON	DC	04/30	07:34
Arrived at FedEx Dest Loc	WASHINGTON	DC	04/30	07:26
Package Left FedEx Ramp	CHANTILLY	VA	04/30	07:17
Package Left FedEx Ramp	CHANTILLY	VA	04/30	03:11
Package Arrived at FedEx Ramp	CHANTILLY	VA	04/30	00:48
Left FedEx Origin Location	HAGERSTOWN	MD	04/29	20:45
Pickup Exception	HAGERSTOWN	MD	04/29	18:21
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421 Aviation Way • Frederick, MD 21701-4798
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EX PARTE URGENT FILED

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April 29, 1996

Office of the Secretary
Federal Communications Commission
1919 M Street, NW
Washington, DC 20554

MAY 8 1996

RE: Amendment of Part 87 of the Commission's Rules to Permit Automatic Operation of
Aeronautical Advisory Stations (Unicom); WT Docket No. 96-1/FCC 96-2

To the Commission:

The Aircraft Owners and Pilots Association (AOPA) represents more than 340,000 general aviation pilots and aircraft owners operating from mostly non-towered airports in the United States. The association supports the use of automated Unicom provided they are not disruptive to normal activities on the associated frequencies.

AOPA's members operate from thousands of airports without Air Traffic Control (ATC) towers which rely on airport safety information from advisory sources provided by Unicom and multicom. Many of these airports have little resources and simply do not have the staff to man a dedicated Unicom station. Additionally, those that do make that investment, normally provide these services during normal operating hours. Pilots operating outside those hours or at airports without this service altogether, must rely on other less reliable sources or possibly go without. The association believes that capable automated unicom systems like the one designed by the Potomac Aviation Technology Corporation (PATC) have matured to the point that they will provide a valuable alternative to today's system and ultimately improve safety by making these services available at more airports.

Automated unicom systems, however, are not without their problems, but we believe they can be managed using intelligent designs and common sense spectrum management. A number of these problems are addressed in the proposed rule as well as the initial comments.

One fundamental problem that exists is the limited number of unicom frequencies available for use. The Federal Aviation Administration (FAA) designated several 25kHz spaced channels for this purpose partly in hope to encourage general aviation aircraft owners to upgrade older radios with only 50kHz tuning capabilities. This did not have the desired effect and older radios still reside in many general aviation cockpits. Knowing this, airport operators have made the choice to either wait for more 50 kHz frequency assignments to become available or wait until more aircraft are capable of tuning 25 kHz frequencies. So frequency congestion problems on unicom

frequencies continues to be a problem. A poorly designed automated unicom could just add to the problem.

The Potomac Aviation Technology Corporation's (PATC) product known as the Super Unicom, seems to handle this congestion problem in a non-intrusive manner using a combination of transceiver power and sensitivity, and intelligent software programs. This system may serve as a model for other similar systems. However, we must caution against writing regulatory requirements to fit one system design. It is important to provide for flexibility in meeting some minimum standards and allow for future enhancement. For instance, there may be a safe and efficient means of providing traffic, weather and advisory information on a single Common Traffic Advisory Frequency (CTAF) using an automated system. Of course, this concept would have to be operationally tested, but this rule should not preclude such a system.

Response to comments on specific items in the proposed rule follow.

Restricting Automated Unicom to 25 kHz Frequencies - As mentioned above, the FAA's attempt to encourage general aviation operators to equip with 720 or 760 channel radios by assigning 25 kHz frequencies to new unicom and ASOS and AWOS has failed to produce the desired result. There is no reason to believe that adopting a similar policy on channel assignments for automated unicom will change that result. It will simply make unicom services unavailable to those that need them most, and ultimately have a negative impact on safety. AOPA also recognizes that all aircraft will be required to meet the new immunity standards by January 1997, and in most cases, retrofitting with radios that tune 25 kHz spaced channels has been one of the most cost-effective means of complying with the new requirement. However, there are some radios that are incapable of tuning 25 kHz channels that do meet the 1997 immunity standard. Automated unicom services must not be withheld from these users arbitrarily. Furthermore, limiting automated unicom to 25 kHz channels will unnecessarily restrict those airports using a 50 kHz or 100 kHz channel assignment from taking advantage of this technology. Additionally, operators who apply for a new unicom frequency should not be limited to 25 kHz frequencies when a 50 or 100 kHz assignment is available and more practical. AOPA ***strongly opposes*** FCC placing this politically motivated restriction on automated unicom frequency assignments.

Monitoring Frequency Prior to Transmission - AOPA agrees with FCC's proposal to require an automated station to monitor the frequency for other transmissions prior to transmitting its message. However, we also agree with PATC's comments on this issue. Requiring a three second delay is excessive. Further, the FAA's proposal to require a five second delay is simply unworkable, and would cause the precise problem they are attempting to avoid: frequency congestion. Such long delays would create confusion and cause pilots to make multiple transmissions/requests when they heard silence instead of a nearly immediate response. The limitation here is clearly an operational one rather than a technical one. So the question which needs to be answered is what best fits into the normal operational traffic on the frequency. Based on experience, a delay of no longer than about one second is more appropriate, and a delay about one-half second would seem most compatible in these situations. Waiting longer, would probably

prevent anyone from getting an automated report during peak traffic levels. This would be especially true in areas where more than one airport in an area share one frequency. Pilots have become quite adept at beginning a transmission as soon as the previous one is concluded. We believe that the shorter time delay would be sufficient for pilots to beat an automated unicom response if desired. Setting a maximum and minimum duration specification, and allowing the operator to set that parameter within that specification would be the optimal solution. This would provide operators with the flexibility to accommodate the variety of local conditions that exist at different airports.

PATC's suggests that the system be permitted to gauge frequency congestion, and provide an immediate response of "Please Standby" followed by an advisory when there is an adequate break. AOPA believes this would be another acceptable means of avoiding additional frequency congestion. An immediate acknowledgment of the requests informs the pilot the automated unicom received the request and will provide the requested data shortly. This prevents the requesting pilot from questioning if the request was received and possibly causing him or her to unnecessarily use more time on frequency by making a second request. This is an example of the flexibility the association believes should be afforded by this rule.

Transmit Only in Response to Brief RF Signals (Microphone Clicks) - AOPA shares the concern voiced by PATC in limiting automated unicom's responses to only "microphone clicks." Voice recognition by automated systems is still not perfected, but FCC should not rule out this option or any other that proves efficient and effective. Wording this regulation in such a manner to allow this or similar means of compliance would be prudent such as: "Transmit only in response to information requests intended specifically for automated unicom's." This should be followed with known examples. Specific standards for each option should be published in an advisory circular including the duration of time within which multiple "microphone clicks" should occur. This will prevent confusion that might otherwise be caused by non-standardized systems.

Time and Date Stamp - AOPA disagrees with the Commission that a time and date stamp should be required for all advisory messages. We believe that this feature is only valuable when there is a high likelihood of outdated information being provided. Because AWOS or ASOS continually update information provided via the VHF transmission, a time and date stamp would be unnecessary provided fail-safe mechanisms exist to prevent outdated information being transmitted. These systems as well as the automated unicom systems are capable of omitting information from weather sensors that stop providing continuous output or are provided obvious erroneous output. In those cases where an observation sensor experiences an undetected failure, i.e. some type of partial obscuration to the visibility sensor, providing a time and date stamp will not provide any greater understanding of the problem to pilots. Time and date stamps are really only valuable to database systems which periodically poll observation systems in order to provide standardized hourly reports. Requiring automated unicom's to provide this time and date stamps information will only make these systems less efficient in terms of frequency congestion. PATC offers the suggestion to require no information older than five minutes (except NOTAMS) to be provided by automated stations. This seems to be one legitimate means of mitigating the

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provision of outdated information, however, it may not be the only means. The regulations should provide enough flexibility to permit other means of mitigation.

No Weather at where an AWOS or ASOS is installed - We agree that it is unnecessary to provide weather from both an AWOS or ASOS and an automated unicom. However, it is possible that an AWOS or ASOS report could be provided through an automated unicom service. Therefore, AOPA believes the FCC should adopt the FAA's recommendation to provide only AWOS or ASOS weather when available, but to permit the transmission of that data over automated unicom.

AOPA also agrees that weather information collected by an automated unicom system be disseminated as advisory only. A brief conditional descriptor of "advisory" would seem appropriate where the sensors are not certified for IFR operations. Using the term "VFR" in the advisory statement might be confusing, and lead pilots to believe that VFR weather conditions exist at the airport when they do not. The commission should, however, allow for the possibility of an automated unicom being approved to provide a certified altimeter setting for IFR operations.

Automatically shut down after three minutes of continuous transmission - The association agrees with the Commission's proposal to add a safety mechanism by requiring automated unicom to shut down after a specified period of continuous transmission. This is not only a matter of operational convenience, but safety as well. However, we believe even three minutes to be too long. The average duration of Automated Surface Observation Systems (ASOS) and Automated Weather Observation Systems (AWOS) transmissions during poor weather seems to be somewhere around forty-five seconds. Since automated unicom would rarely provide much more information than that, one minute rather than three, would seem more appropriate. If multiple applications are carried by automated unicom in the future, an additional fifteen to thirty seconds might be in order. In either case, there should be room for special exceptions. For instance, fly-in events take place regularly around the country on an annual basis. Many of these fly-ins use special VFR arrival and departure procedures that would be broadcast on an ATIS frequency if available. Often, one does not exist. Automated unicom could fulfill this role with a request/reply format rather than broadcast. In this case, as much as two or three minutes may be needed to transmit the full message. Despite the longer duration, it would still result in improved efficiency by reducing the number of required frequencies, and prevent unnecessary broadcasts when no one is listening.

One Automated Unicom per Airport with a Signed Management Agreement when the system is managed by multiple airport operators - Limiting each airport to one automated unicom seems to be a prudent proposal since we are not aware of a need for more than one advisory service per airport.

In terms of the management of the automated unicom by multiple licensees, AOPA believes there should be only one operator per unicom under normal circumstances. We are only aware of the

multiple licensees sharing the same unicom frequency at airports with air traffic control towers. Weather and traffic information is usually provided by a combination AWOS/ASOS and/or the tower personnel themselves. There may be other situations where multiple licensees share a common unicom frequency now, and therefore an agreement signed by all the airport operators who share in the management of the automated unicom is a prudent requirement. However, AOPA believes that these situations should be kept to a minimum since management by multiple company disputes may arise which might impact user service.

AOPA agrees with the FAA's concern regarding termination of unicom operations if an agreement is not signed within 90 days. This should be a discretionary action on the part of the FCC based on the circumstances. Additionally, there should be a fair process by which one of the operators who might object to signing the agreement could be removed from the license.

Limiting Number of Automated Advisories in a Given Time Period - Limiting the number of automated advisories in a given time period effectively withholds information from pilots who need it. AOPA strongly opposes withholding relevant information from pilots. Repetitive advisories during peak operating periods should not be a concern. The situation will police itself in that if the frequency is that congested, pilots will not pause between transmissions to give the automated system a chance to respond to a request. Pilots will also request less advisories because they will gain the minimum level of information they need to operate in and out of the airport by simply monitoring other aircraft transmissions.

Brevity - It is important that messages be concise and straight forward. PATC suggests specific language on controlling the content and length of automated advisory information by withholding less relevant information during periods of high frequency congestion. As mentioned above, AOPA believes pilots must have access to all relevant information. If the information is not relevant to those operating at the airport, it should not be provided over an automated system. Doing so will most likely cause the system to be more complex and less spectrum friendly. Human unicom operator intervention would appear to be a better means of handling request for non-relevant information. This raises the next point

Human unicom operators must be able to override the automated system at anytime. This means not only being able to override information fields provided by the automated systems, but also to easily revert to a manual unicom operation at a moments notice. The PATC system does this, but it is not mentioned in the proposed rule

Additionally, pilots should also be able to override the system somehow. This is necessary to prevent automated unicom transmissions from interfering with emergency situations or significant system malfunctions, and might be accomplished several ways. Two specific options come to mind. First, by limiting the automated unicom power to approximately one-half watt, aircraft radios, which normally transmit at about 5 watts, could simply overpower the unicom transmission. However, the power limit should be flexible to allow for unique situations that might require more power to serve a given airport area. A second alternative would be for the

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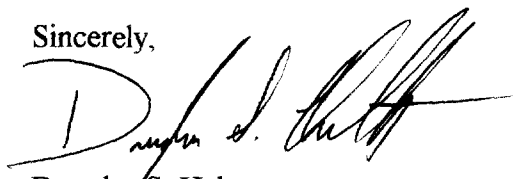
automated unicom to incorporate a feature which senses a transmission of a specified power level, and automatically stop its advisory transmission. There may be other means of accomplishing this function for which the rule should allow.

When Unicom is Also Common Traffic Advisory Frequency (CTAF), Limit Advisory Content to that Specified by § 87.213 (b)(1). - AOPA agrees with the FAA on their recommendation that the content of automated unicom messages over a CTAF be limited to those specified in § 87.213(b)(1).

Additional guidance should be provided through an FAA Advisory Circular. This would provide a more flexible and timely means of changing standards and management practices for automated unicom.

AOPA supports the cost-effective application of new technology because we believe that the SuperUnicom made by PATC demonstrates that automated unicom have now matured to the point that they will enhance safety and efficiency at airports, and provide recognizable benefits to the general aviation community. AOPA urges FCC to enact the proposed rule with the inclusion of the above recommendations.

Sincerely,

A handwritten signature in black ink, appearing to read "Douglas S. Helton". The signature is fluid and cursive, with a large initial "D" and a stylized "H".

Douglas S. Helton
Vice President
Regulatory Policy